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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/732,929

12/11/2003

Tieyu Zheng

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03/10/2006

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EXAMINER

MOONEY, MICHAEL P

ART UNIT

PAPER NUMBER

2883

DATE MAILED: 03/10/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/732,929	Applicant(s) ZHENG, TIEYU	
	Examiner Michael P. Mooney	Art Unit 2883	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 February 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 and 21-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 6, 10-12, 21, 22 and 25-28 is/are rejected.
- 7) ☒ Claim(s) 5, 7-9, 23 and 24 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 December 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Drawings

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the metallization layer must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Election/Restrictions

Applicant's election without traverse of Group I claims 1-12 in the reply filed on 2/21/06 is acknowledged.

The cancellation of claims 13-20 is acknowledged.

New claims 21-28 have been entered for examination.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1-4, 6, 10-12, 21-22, 25-28 are rejected under 35 U.S.C. 103a as being unpatentable over Rechberger et al. (20040240803).

Rechberger et al. teaches an optoelectronic package (e.g., fig. 2) comprising: an insulating base 30 having an upper surface; an optoelectronic device (e.g., but not limited to element 12) mounted on the upper surface of the insulating base; a metal

layer 38 attached to the upper surface of the insulating base 30; and a cap 16 having a rim located at a bottom portion thereof, wherein the cap encloses the optoelectronic device and the rim of the cap 16 is adapted to attach to the metal layer to hermetically seal the metal cap to the insulating base

Although Rechberger et al. does not explicitly state that the cap 16 is “metal”, it would have been obvious to do so because it is conventionally known to use metal caps on TO cans, especially for processes taught in Rechberger et al. such as resistance welding.

One of ordinary skill would have been motivated to explicitly state “metal cap” for the purpose of stating aspects of the invention, which are conventional to those of ordinary skill in the art, to those who may not have ordinary skill in the art.

Thus claim 1 is rejected.

Rechberger et al. teaches wherein the insulating base has an external surface on the outside of the optoelectronic package (e.g., fig. 2). Thus claim 2 is rejected.

Rechberger et al. teaches further comprising: a plurality of vias running from an exterior of the optoelectronic package through the insulating base into an interior of the optoelectronic package (e.g., figs. 3, 4). Thus claim 3 is rejected.

Rechberger et al. teaches wherein the plurality of vias are electrically coupled to the optoelectronic device (e.g., figs. 3, 4). Thus claim 4 is rejected.

Rechberger et al. teaches wherein the optoelectronic device is mounted on a submount that is mounted on the upper surface of the insulating base. (e.g., figs. 2, 3, 9, 10). Thus claim 6 is rejected.

Rechberger et al. teaches wherein the optoelectronic device is an optical transmitter and/or optical receiver. (e.g., figs. 2, 3, 9, 10). Thus claim 10 is rejected.

Rechberger et al. teaches wherein the metal layer 38 comprises a metallization layer 45 at least partially covering a top surface of the insulating base. (e.g., figs. 2-4). Thus claim 11 is rejected.

Rechberger et al. teaches wherein the metal layer further comprises a metal sealing member coupled to the metallization layer. (e.g., figs. 2-4). Thus claim 12 is rejected.

Rechberger et al. teaches an optoelectronic package comprising: an insulating base 30 having an upper surface (e.g., fig. 2); an optoelectronic device 12 mounted on the upper surface of the insulating base; a cap 16 hermetically sealed to the upper surface of the insulating base 30 to enclose an optoelectronic device 12; and a plurality of electrical leads (e.g., figs. 2-4) running through the insulating base into an interior of the optoelectronic package, wherein the electrical leads are electrically coupled to the optoelectronic device (e.g., figs. 2-4).

Although Rechberger et al. does not explicitly state that the cap 16 is "metal", it would have been obvious to do so because it is conventionally known to use metal caps on TO cans, especially for processes taught in Rechberger et al. such as resistance welding.

One of ordinary skill would have been motivated to explicitly state "metal cap" for the purpose of stating aspects of the invention, which are conventional to those of ordinary skill in the art, to those who may not have ordinary skill in the art.

Thus claim 21 is rejected.

Rechberger et al. teaches including a metal layer 38 attached to the upper surface of the insulating base; and wherein the cap 16 includes a rim to attach to the metal layer to hermetically seal the metal cap to the insulating base. (e.g., fig. 2). As explained above it is conventional for the cap and rim to be metal. Thus claim 22 is rejected.

Rechberger et al. teaches wherein the insulating base comprises ceramic (paragraphs 0003, 0052). Thus claim 25 is rejected.

Although Rechberger et al. does not explicitly state "wherein the insulating base comprises one of alumina, beryllium oxide and aluminum nitride" it would have been obvious to do so because it is conventionally known to use alumina, beryllium oxide and aluminum nitride in the type(s) of ceramic substrates used in Rechberger et al. One of ordinary skill in the art would have been motivated to use an insulating base comprising one of alumina, beryllium oxide and aluminum nitride for the purpose of conforming to conventionally used techniques in order to have a higher probability of producing a reliable, functioning product. Thus claim 26 is rejected.

Rechberger et al. teaches wherein the insulating base is substantially planar (e.g., fig. 2). Thus claim 27 is rejected.

Rechberger et al. teaches wherein the metal cap includes a transparent portion (e.g., fig. 2). Thus claim 28 is rejected.

Allowable Subject Matter

Claims 5, 7-9, 23-24 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Regarding claims 5, 7, 23-24, the prior art, either alone or in combination, does not disclose or render obvious: the plurality of vias are held in place by solder; the metal layer extends at least partially past a top surface perimeter of the insulating base; the insulating base is coupled to a heat sink in combination with the respective claim.

It is noted that each respective said claim is allowable because the unique combination of each and every specific element stated in the each respective claim.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael P. Mooney whose telephone number is 571-272-2422. The examiner can normally be reached during weekdays, M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frank G. Font can be reached on 571-272-2415. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

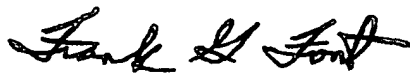
Art Unit: 2883

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 571-272-

1562.



Michael P. Mooney
Examiner
Art Unit 2883



Frank G. Font
Supervisory Patent Examiner
Art Unit 2883

FGF/mpm
3/3/06